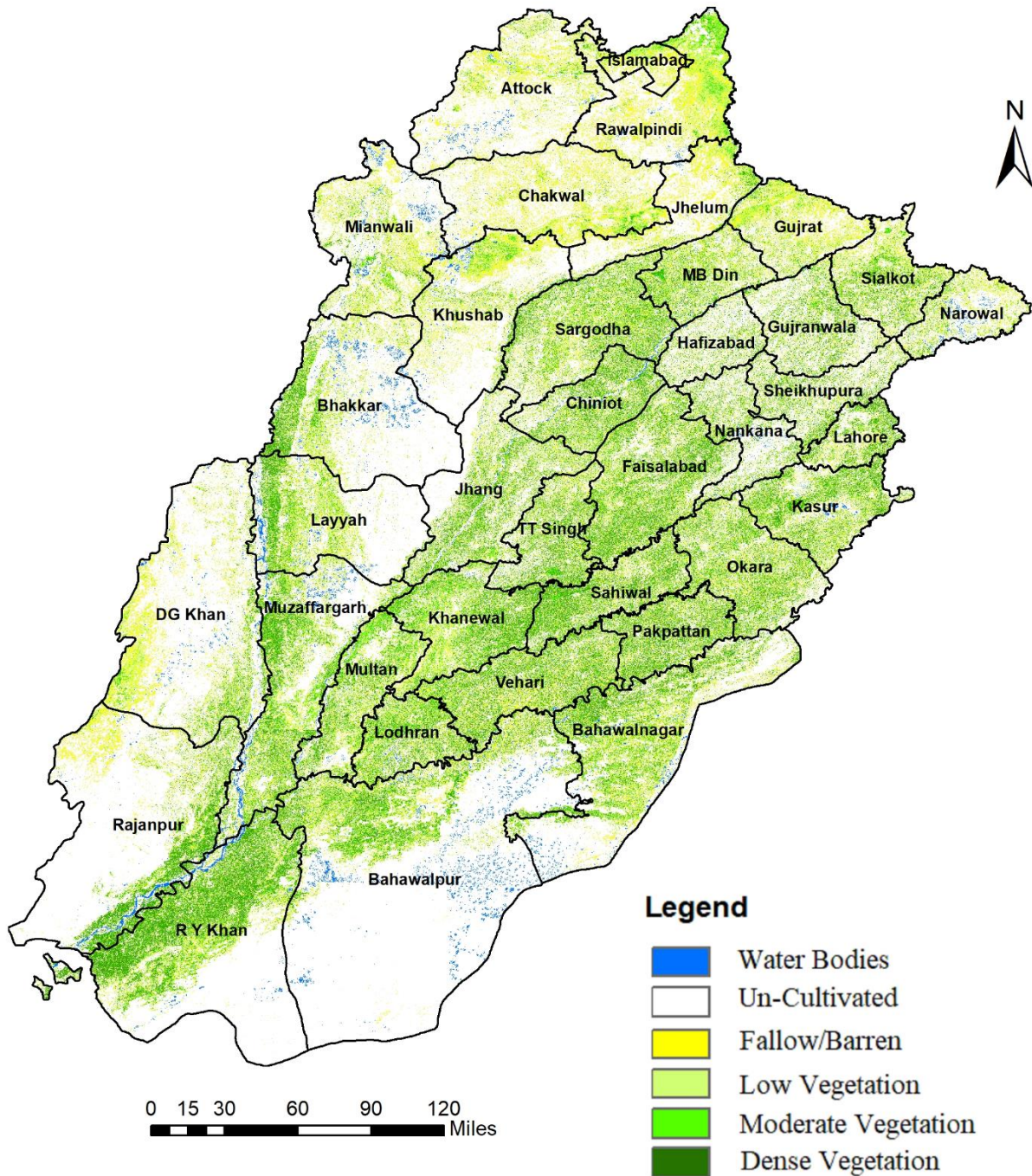




Standing Crop Situation (Jun 2nd Half, 2023)



Sentinel-2 satellite imageries were used: This system captures high-resolution Earth images and uses NDVI to assess vegetation health, monitor growth, detect crop stress, and manage land resources efficiently through visible and near-infrared light measurements.

Note: Blue-shaded area, other than river/canal belts, is under clouds or standing rainfall water, mostly in districts Bahawalpur, D.G.Khan, Muzaffargarh, Mianwali & Attock





Crop Monitoring In Punjab through Remote Sensing *Kharif Season*

Normalized Difference Vegetation Index (NDVI) Analysis

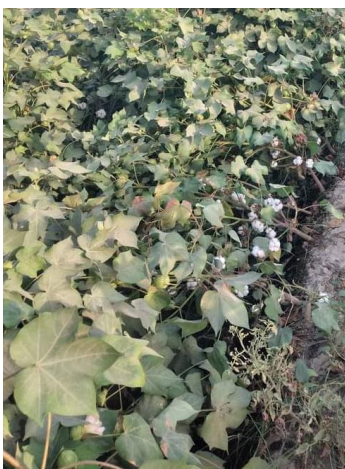
Area in '000' acres

Categories	June 2 nd Half	June 1 st Half	% Change	Comments
Water Bodies	500	475	5.3	Like rivers, lakes, canals, rainfall water, ponds, etc.
Un-Cultivated	12,324	12,401	-0.6	Built-up, dessert, mountain, etc.
Fallow	7,135	12,558	-43.2	Fallow area ready to cultivate (or Barren).
Low Vegetation	20,543	15,263	34.6	Crops like rice transplantation, & minor crops (vegetables & fodder, etc.)
Moderate Vegetation	7,436	6,693	11.1	The area under cotton & sugarcane, rice (May sowing), etc.
Dense Vegetation	2,679	3,227	-17.0	Crops like cotton (early), sesamum, fodder, orchards & forest, etc.
Total Area	50,617	50,617		

Low vegetation refers to areas with relatively sparse and less dense vegetation cover. Moderate vegetation indicates areas with an intermediate level of vegetation density. Dense vegetation describes areas with a high concentration of plant growth and more extensive coverage of vegetation. These categories are often determined based on the values of the NDVI, with specific NDVI ranges assigned to each category. Low Vegetation= 0.17 to 0.32, Moderate Vegetation= 0.32 to 0.42, Dense Vegetation= 0.42 to 0.80.

Summary

- The early cotton crop, sown in March, is flourishing, with harvesting already underway in south Punjab, and the late cotton crop is flowering/bolling as reported by Field Staff.
- Maize harvesting is nearing completion, with expectations of a higher average yield.
- Rice transplantation is up to 30% complete, with an expected increased cultivation area compared to last year, as per ground truthing results reported by Field Staff.
- NDVI indices indicate healthy conditions for sugarcane & minor crops (sesamum, fodder & vegetables).
- NDVI analysis reveals no crop stress observed during the latter half of June.



(a) Cotton Crop (Early)



(b) Rice Transplantation



(c) Sesamum



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